

Case study of attempts to enact self service tobacco display ordinances: a tale of three communities

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Abstract

Objective—To examine self service tobacco displays (SSTDs) and youth retail tobacco access by comparing longitudinal illegal tobacco sales rates in three communities in Santa Barbara County, California, that considered or implemented ordinances banning SSTDs. A confirmatory survey was also conducted to substantiate the longitudinal data.

Design—A longitudinal case study design was utilised. Five undercover tobacco buys were conducted between 1994 and 1997 (n = 332). In addition, one confirmatory survey was conducted in a geographically separated area, which had no ordinances banning SSTDs (n = 57).

Results—Decreases in youth buy rates were reported in all three communities. Most notably, the first city to enact a SSTD ban, Carpinteria, achieved a 0% sales rate, which was maintained throughout the study period. In contrast, Santa Barbara and Goleta experienced considerable drops in their illegal sales rates, but neither community obtained results as dramatic as those found in Carpinteria. The confirmatory survey showed that 32.1% of stores with SSTDs sold cigarettes to minors; this compares to a sales rate of 3.4% in stores without SSTDs (χ^2 (1) = 8.11, p = 0.004).

Conclusions—Efforts to enact self service bans are likely to meet with retail and tobacco industry opposition, as was the case in this study's three communities. The process of community debate, resultant publicity surrounding the issue, and enactment of SSTD ordinances may serve to not only increase merchant awareness of youth tobacco laws and their penalties but also may contribute to reduced youth cigarette sales rates. Implications and limitations of the findings are discussed.

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Keywords: self service tobacco displays; youth tobacco access; community tobacco control efforts

Introduction

Despite decades of research and public advocacy efforts to reduce tobacco use, nicotine addiction continues to be one of the most pressing public health problem in the United States. Since the majority of individuals who become addicted to nicotine start smoking and chewing as adolescents, national attention has increasingly focused on efforts to

prevent early tobacco use among youth.^{1,2} Nonetheless, after many years of decline, teen smoking rates are rising. Overall prevalence of current cigarette smoking among students in grades 9 to 12 (ages 14-18 years) increased from 27.5% in 1991 to 36.4% in 1997, a 32% increase.³ Similar increases are being reported in California where smoking prevalence for this age group increased 23% between 1993 and 1997.⁴

Nicotine dependence is a progressive and chronic addiction. The tobacco industry depends on its ability to attract adolescents to experiment with its products and then to use them with sufficient frequency and duration to become addicted. Nearly 3000 youths are attracted daily to start smoking, translating into as many as one million new American underage smokers annually.⁵ It is estimated that an adolescent who starts smoking today will smoke for a minimum of 16 years if male and 20 years if female.⁶ Because youth experimentation can result in a life long habit, it is increasingly recognised that the ease with which retail tobacco products are obtained by youth can significantly contribute to long term use.⁷⁻⁹ Thus, legislation designed to make it harder for youth to obtain tobacco products has been developed to delay youth experimentation with tobacco and prevent its use. These legislative attempts at preventing uptake of tobacco use among youth have focused on restricting youth access from retail sources. Such policies have taken numerous forms at the federal, state, and local level (some successful and others not yet realised). The enactment of the Synar Amendment (1992), for example, required states to enforce existing laws that prohibit the sale of tobacco products to youth under 18 years of age.

Even with federal and state legislation regulating tobacco sales to youth, tobacco sales to minors are common. Studies conducted throughout the United States show that minors successfully purchase tobacco products approximately 70% of the time.^{2,5,8-14} In one study, eighth graders (ages 13-14) report that they can get cigarettes fairly easily (about 76% of the time) and by the 10th grade (ages 15-16) over 90% say they can easily obtain tobacco products.¹⁵ Other research estimates that as many as 91% of all cigarettes consumed by underage smokers are obtained from retail sources, either directly or indirectly through an intermediary purchaser.¹⁶

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Regulations that have been proposed by the Food and Drug Administration would make it difficult for minors to obtain tobacco products in impersonal ways—that is, from vending machines, free samples, and self service tobacco displays (SSTDs).¹⁷ The goal of this strategy is to create conditions that require youths to interact with an adult in order to obtain tobacco products. Following this strategy, since the early 1990s, ordinances eliminating SSTDs have been increasingly used as one approach to curb retail sales of tobacco to youth.^{9, 18} SSTDs are defined as a “display of tobacco products, generally packs of cigarettes or containers of spit tobacco, on a rack, shelf or kiosk, that the public has access to without the assistance of a store employee.”¹⁹ Typically merchants receive a retail display allowance, which is a payment from tobacco companies to place tobacco products at the point of purchase, within easy reach of customers, as a marketing technique.

It is believed that SSTDs increase youth access to tobacco products by increasing illegal sales and shoplifting.^{7, 9, 18} Wildey and colleagues found that sales to underage youths in San Diego, California dropped from 31% to 13% when stores eliminated self service access to tobacco.⁹ Data from the California youth tobacco purchase surveys has produced inconsistent results. Sales rates from the 1997 survey showed a significant difference between stores with and without SSTDs, but the 1998 survey did not replicate this finding.^{19, 20}

Eliminating the self service display of tobacco in a community presents formidable challenges. Merchants must either voluntarily forgo SSTDs or a law must be enacted to prohibit their use. Retailers, however, are not likely to give up the “easy” retail display allowance money available for prominent tobacco merchandising. When enacting ordinances, local government officials may perceive bans on SSTDs to be anti-business, and want to avoid publicly taking this position. In one state, when a community passed a self service display ban, it was repealed after a lawsuit was filed by merchant organisations on the grounds that state laws regulating tobacco sales pre-empted the local ordinance.⁷ Even in states where such pre-emptive clauses do not allow for similar legal challenges, it remains evident that merchant and tobacco interests may be intent on preventing SSTD bans.

It is difficult to examine the effects of policy mandated SSTD bans because of the impossibility of experimentally enacting local ordinances for comparison purposes. However, in 1994 an opportunity presented itself in Santa Barbara County to conduct a case study on the process of ordinances banning SSTD and the potential effects of such ordinances on illegal cigarette sales to youth. Specifically, local government agencies in three communities began to debate comprehensive tobacco control legislation, which included extensive youth access provisions, among them a ban on SSTDs. Each community resolved the issue of SSTDs differently. At the same time, as part of the county's tobacco prevention programme,

annual youth undercover purchases were being conducted.

The conjunction of differing approaches to SSTDs with longitudinal youth tobacco sales data in Santa Barbara County provided a rare opportunity to explore the possible connection between SSTDs and retail access to cigarettes by minors. The purpose of this study was to utilise a longitudinal case study design to help clarify how the process of both debating and enacting local ordinances banning SSTDs might impact illegal cigarette sales to minors in three Santa Barbara County communities taking differing approaches to SSTD ordinances. The primary research questions are: (1) what potential impact does the debate and passage of SSTD ordinances have on the sales of tobacco cigarettes to underage youths?; and (2) what additional evidence is available to help explain the potential role of self service tobacco displays on underage access to tobacco products?

Methods

COMMUNITIES AND HISTORY OF SELF SERVICE DISPLAY BANS

The three communities studied for the longitudinal buys were Carpinteria (population 14 870), Santa Barbara (population 91 200), and Goleta (population 68 000). They are juxtaposed along a narrow 40 mile coastal strip, wedged between the Pacific Ocean and the Santa Ynez mountain range. The geographic nature of these areas (being spread out lengthwise over considerable distance and sharing few common boundary lines) makes it more likely that youths within each community were primarily reliant on local sources for their routine tobacco access. In addition, the confirmatory assessment conducted during the final tobacco survey, took place in northern Santa Barbara County (combined population of 179 000). While northern Santa Barbara County shares the same media market as the three study communities to the south, it did offer several control mechanisms. First, the communities in North County are physically isolated from the South County communities by either a mountain range or by considerable distance (30–70 miles). Further, the northern communities do not have any ordinances banning SSTDs.

The location of the study communities combined with their varying approaches to SSTDs provided an opportunity to study the effects of such ordinances on tobacco sales rates to underage youth. Local policy makers in the three study communities simultaneously began to examine the prospect of regulating SSTDs early in 1994. Goleta, which is under the jurisdiction of the county board of supervisors, passed a law requiring the “sight surveillance” of tobacco products (effective January 1995); this required all tobacco products to be within the direct sight of a retail clerk, but fell short of requiring a ban. In addition, the board enacted a delayed ordinance banning SSTDs that was to be self executing in December 1995, if the sales rate of tobacco products to minors was above 20%.

Table 1 Percentage of store types surveyed

Type of store	Date of undercover purchase survey					
	Aug '94	Jun '95	Sep '95	May '96	Oct '97	Confirmatory '97
Grocery	21.6	32.8	27.1	33.0	31.4	29.8
Convenience	15.7	10.3	10.2	20.6	12.9	15.8
Liquor	33.3	37.9	33.9	34.4	24.3	26.3
Gas (petrol)/ convenient	17.6	12.1	10.2	7.2	15.7	19.3
Pharmacy	9.8	5.2	5.1	2.1	5.7	3.5
Gas (petrol) only	2.0	1.7	13.6	3.1	10.0	5.3

The delayed enactment and the 20% sales rate provision was the result of intense lobbying by the California Grocers Association, who reported that they represented the interests of local merchants. California Grocers Association spokespeople coached local merchants, exaggerated claims of the lost revenue, and evaded direct questioning about the retail display allowances. Their lobbying resulted in the creation of a task force, which stalled the political process and gave retail representatives the ability to make public the "undercover" nature of the youth tobacco purchases. The board of supervisors reviewed the ordinance in December 1995 and accepted the data²¹ (which county and university officials reported as being artificially lowered by the political efforts of the California Grocers Association) as the basis for postponing implementation until December 1996. After more than a dozen public hearings, spanning three years, Goleta still does not have an SSTD ban. Recently released internal tobacco documents demonstrate that Phillip Morris and the Tobacco Institute developed the "sight surveillance" clause proposed to the board of supervisors. Further, the California Grocers Association was employed to carry out the tobacco industry's objectives to delay and thwart local youth access policy enactment.

The city councils of Carpinteria and Santa Barbara took different routes concerning ordinances banning SSTD. The city council in Carpinteria quickly passed an ordinance that outright banned SSTDs in March 1995. The city council of Santa Barbara followed the path of Goleta and passed a "sight surveillance law" that was to be self executing in December 1995, if the sale of tobacco products to minors was still above 20%. The city was initially committed to enact a law that was substantially similar to the county's. In December 1995, the city council of Santa Barbara elected not to enact the self executing ban on SSTDs, despite a 33% youth buy rate (well above the designated threshold). Council members voted to study enforcement options and altogether abandoned the notion of banning SSTDs. However, the city of Santa Barbara ultimately adopted an SSTD ban (December 1996), persuaded by increased sales rates to minors and the success of the Carpinteria ban. All SSTD ordinances went into effect one month after enactment.

YOUTH UNDERCOVER CIGARETTE PURCHASES

To assess youth access to tobacco products in the three study communities, a series of five undercover tobacco purchase surveys were

conducted at the following intervals: August 1994 (baseline; before the enactment of any local ordinance), June 1995, September 1995, May 1996, and October 1997 (a follow up assessment after all self service bans had been enacted or were no longer being considered). Across all five surveys, underage purchase attempts were made at 332 randomly selected outlets. These outlets primarily consisted of grocery stores, liquor stores, and gas/convenience stores. Table 1 lists the types of stores surveyed.

Buys were conducted approximately annually and included roughly 25% of all retail tobacco outlets in each targeted area. The city of Carpinteria was unique in its sampling design. Because of the small number of retail outlets, and being the only community with a self service ban in place, all tobacco vendors were sampled in Carpinteria (except at baseline). In addition, a greater number of stores were shopped in Santa Barbara and Goleta during the May 1996 buy to gain a better understanding of the illegal sales rates in stores with SSTD versus those without. These preliminary data indicated a possible connection between illegal tobacco sales in stores with SSTDs, which gave the support to conduct the follow up survey in North County stores during the final buy.

All undercover tobacco purchases were made between the hours of 4 pm and 9 pm and only one purchase attempt for each selected retail outlet was made. No purchase took place after 10 pm (the curfew time for the youths participating in the survey). The surveys were completed by youths aged 15 and 16 with balanced participation of females, males, and youths of various racial/ethnic backgrounds. Before conducting the surveys, all youths were trained to use structured protocols when attempting to purchase tobacco products. In stores that had SSTDs, youths were instructed to pick up a pack of cigarettes without asking for a clerk's assistance. In retail outlets that had no SSTDs, the youths had to ask the clerk for a specific brand of cigarettes. Youths surveyed stores in teams of two, with adult volunteers waiting in vehicles in an inconspicuous location. The adult did not enter the store with the youths. Cash was provided so that if the clerk was willing to sell, the youth actually purchased the cigarettes and exited the store with the pack. This contrasts with previous California purchase surveys that evaluated clerks' willingness to sell without actually consummating the sale. If asked for their age, youth responded honestly. Immediately after each purchase attempt, the adult volunteer completed a data sheet summarising the attempted buy and acquired the cigarettes if a sale was made.

STORE SELECTION AND DATA ANALYSIS

To conduct the underage purchase surveys a complete listing of all tobacco retailers was obtained from the California State Health Department based on data from the State Board of Equalization. Throughout the time of this investigation, stores were dropped from the database if they went out of business and new

Table 2 Percentage of illegal cigarette sales to underage youths

Community	Date of undercover purchase survey				
	Aug '94	Jun '95	Sep '95	May '96	Oct '97
Carpinteria	40.0 (10)	35.7 (14)	6.7 (15)	00.0 (15)	00.0 (15)
Santa Barbara	37.5 (24)	72.4 (21)	33.3 (30)	40.4 (47)	14.3 (35)
Goleta	64.3 (14)	71.4 (14)	13.3 (15)	17.1 (35)	11.1 (18)

Numbers in parentheses represents total numbers of stores shopped in that community.

outlets were added as appropriate. There were 15 retail outlets in Carpinteria, 97 in Santa Barbara, and 43 in Goleta at the conclusion of the study; also there were 146 retail stores in northern Santa Barbara County. The US Department of Health and Human Services²² reports that only 42% of states conducting undercover inspections use scientific sampling techniques. We addressed this concern by using a random numbers generator to select retail outlets for each purchase survey in Santa Barbara, Goleta, and northern Santa Barbara County. Data analysis included descriptive statistics and χ^2 analysis to determine if significant differences existed between illegal tobacco sales rates in stores with and without SSTDs.

Results

Th results of the underage purchase surveys are presented within the context of each community's consideration of an SSTD ban. Table 2 shows specific sales rates and longitudinal trends in each community.

CARPINTERIA

Carpinteria implemented a ban on SSTDs in April 1995. For the first two buys, one taking place before the implementation of the ban (August 1994) and the other taking place three months after (June 1995), a significant percentage of purchase attempts were successful, 40.0% and 35.7%, respectively. About seven months after the enactment of the ordinance (September 1995), the sales rate dropped to 6.7% and was 0% for the following two surveys.

SANTA BARBARA AND GOLETA

Santa Barbara and Goleta had underage sales rates of 37.5% and 64.3%, respectively, during the August 1994 baseline assessment. Before the reconsideration of the SSTD ban in late 1995, Santa Barbara had a sales rate of 72.4% and Goleta had a sales rate of 71.4% in June 1995.

In June of 1994, the California Grocers Association began an aggressive campaign (in secret alliance with, and significantly funded by, the tobacco industry) to defeat the passage of SSTD bans in Santa Barbara County. In August 1995, the California Grocers

Association sent all county merchants a notification that warned of a "tobacco sting" to be conducted by the county health department during the month of September. This notice informed merchants of the financial penalties if caught selling tobacco products to minors and went on to mention SSTDs. Specifically it stated, "Information gathered from the sting operation is being compiled and will be presented to the county board of supervisors in an effort to ban all self service display racks. What does this mean? Forced removal by the county of all cigarette racks will cause you to lose your merchandising fees. This financial loss can result in the need to layoff your employees or increase prices".²¹

Clearly, this prenotification had a major impact on the September 1995 sales rate, with Goleta's illegal sales dropping from 71.4% to 13.3% and Santa Barbara's from 72.4% to 33.3%. Despite the board sanctioned evaluation report, which stated that, "this prior notification was an uncontrolled source of bias" and the evaluator's testimony that sales rates were artificially reduced, the board of supervisors was persuaded by the California Grocers Association and local merchants to postpone the SSTD ban until December 1996.

Given rising sales rates to minors (40.4% sales rate for the May 1996 survey), the Santa Barbara city council enacted an SSTD ban in December 1996, which was identical to that previously passed in Carpinteria. By the end of this study, Goleta still had not enacted a ban on SSTDs. Follow up assessment of underage sales rates in May 1996 and October 1997 showed that the sales rate in Goleta remained low (17.1% and 11.1%, respectively) and Santa Barbara's rate dropped considerably to 14.3% after their implementation of an SSTD ban.

IMPACT OF TOBACCO PRODUCT PLACEMENT ON SALES RATES

To examine further SSTDs and tobacco sales to youths, a separate survey was conducted (during the October 1997 buy) in northern Santa Barbara County—not one of the three original study communities. Retail outlets in the North County were under no legal obligation to remove SSTDs, therefore the decision to use this form of tobacco merchandising was strictly up to individual merchants. All stores were randomly selected from the database of retail outlets selling tobacco products in northern Santa Barbara County. Of those stores sampled, 50.9% (n = 29) required clerk assistance to purchase tobacco products (that is, stores with no SSTDs) and 49.1% (n = 28) of those stores shopped had tobacco products accessible for customers. Close to one third (32.1%) of the stores with SSTDs sold to minors which contrasted with just 3.4% at stores without SSTDs (χ^2 (1) = 8.11, p = 0.004) (table 3).

Discussion

Given the fortuitous convergence of Santa Barbara County's geographic environment, differing community approaches to SSTDs,

Table 3 Cigarette sales to minors in North Santa Barbara County retail outlets with mixed SSTD status

	Was a sale made?		
	Yes (n (%))	No (n (%))	Total (n)
Self service displays (tobacco accessible)	9 (32.1)	19 (67.9)	28
No self service displays (tobacco inaccessible)	1 (3.4)	28 (96.6)	29
Total	10 (17.5)	47 (82.5)	57

χ^2 (1) = 8.11, p < 0.01.

and local tobacco control efforts, a unique opportunity emerged to conduct a case study and explore the potential impact of enacting SSTDs on youth retail tobacco access. While results from the case study cannot be interpreted as causal, overall our data reinforces existing research^{7 9 18 19} indicating that SSTDs may contribute to illegal tobacco sales to youth. Our data also imply that the process of debate surrounding the enactment of local ordinances to ban SSTDs can increase community awareness of underage tobacco purchases and may stimulate changes in merchant attitudes and behaviours towards selling tobacco products to minors.

While data from this study suggest a connection between SSTDs and illegal tobacco sales to youth, statewide data have not repeatedly validated this conclusion.^{19 20} It is obviously impossible to set up controlled research conditions regarding the experimental manipulation of SSTD ordinances. Further, these events by their very nature are sociopolitical and contextual, and as such, results from this study cannot be replicated or provide empirical confirmation that SSTD bans produce lower youth tobacco sales. We attempted to deal with these unavoidable limitations by utilising data from multiple sources, including: (1) longitudinal trends in the sales rates of cigarettes to minors in three Santa Barbara County communities taking differing approaches to SSTDs; (2) examining results from a recently conducted Santa Barbara County Public Health Department survey of youth concerning their sources of tobacco products; and (3) comparing buy rates from North County stores with and without SSTDs.

When examining all three sources of data, it appears that SSTDs seem to be implicated in illegal tobacco sales to minors. Looking first at the longitudinal data from the three communities, only Carpinteria, the first community to enact quickly a strong ordinance completely banning SSTDs, achieved a stable zero sales rate. Specifically, this city experienced a substantial drop in illegal sales of cigarettes to minors by 81% (from 35.7% to 6.7%) roughly seven months after passage of the ban. Carpinteria's illegal sales rate then dropped to zero for the remainder of the study. A similar trend appeared when the city of Santa Barbara enacted their SSTD ban. The illegal sales rate dropped 65% from 40.4% to 14.3% roughly one year after the ban was enacted.

Next, results from a recent survey²³ conducted by the Santa Barbara County Health Department of 261 youths between the ages of 11 and 17 (mean (SD) 15.23 (1.46) years) supports previous research^{7 9 18} showing SSTDs facilitate illegal cigarette sales to minors. Adolescents living in communities with ordinances banning SSTDs reported having a harder time obtaining retail sources of tobacco. Only 36.7% of youth in Carpinteria stated that it would be "fairly easy or very easy" to buy cigarettes. In contrast, 59.4% of youth living in Santa Barbara and Goleta reported being able to purchase tobacco fairly or very easily. Over 64% of youth surveyed in North

County, a location that does not have ordinances banning SSTD, reported it would be "fairly easy or very easy" for them to buy cigarettes. Survey participants were representative of the ethnic and gender makeup of Santa Barbara County youth and all reported either regular or experimental tobacco use. They were recruited at youth congregational areas including beaches, retail outlets, malls, high schools, continuation schools, and community youth programmes.

The results from the confirmatory survey done in North Santa Barbara County constitute one of the major findings of the current study. The illegal sales rates in stores requiring clerk assistance to purchase tobacco products (that is, stores with no SSTDs) was 3.4%, significantly lower than the sales rate of 32.1% at stores with SSTDs. These results shed additional light on the limited and at times conflicting results from previous studies^{9 19 20} by supporting the proposal that a significant relation exists between SSTDs and illegal cigarette sales to minors. Continued research is needed to understand better the role of SSTDs and illegal tobacco sales to youth.

While efforts were made to deal with the lack of experimental controls inherent in the current case study, primarily by relying on multiple sources of available data, results from this study need to be interpreted in context. As such, there are several limitations in our data that warrant attention. First, the fact that all three communities (in particular Goleta) experienced overall reductions in illegal sales rates regardless of what approaches were taken concerning SSTD bans raises a question as to what causative factors contributed to these decreases. The declines in illegal sales rates seen in the three communities during the study period are most likely the consequence of multiple factors. Elements influencing retailers' heightened awareness concerning the sale of tobacco products to youth conceivably included: (a) synergism of local, state, and national public policy debate and enactment; (b) media attention (especially local); and (c) threats of enforcement aimed at reducing youth tobacco access taking place throughout the study. At no time in the past has tobacco control received such prominent national media attention.

To illustrate the rippling and synergistic impact of local tobacco control efforts on retailers in Santa Barbara County, one need only examine the actions taken by the California Grocers Association. While the California Grocers Association claimed to be conducting a merchant education programme in the county, less than five merchants participated in this programme. What they did do was lobby local officials as well as send out prenotification announcements just after the Carpinteria SSTD ban went into effect (before the September 1995 buy). This countywide mailing notified retailers that enforcement, in the form of undercover tobacco buys, was being conducted. The notice warned merchants that these data would be used to

support the passage of SSTD bans and such ordinances would result in serious revenue losses.

Further, the activities taking place in Santa Barbara County concerning the passage of local SSTDs bans attracted the national involvement of the tobacco industry. With the release of documents from the state of Minnesota's suit against tobacco companies, fiduciary arrangements between big tobacco interests and the California Grocers Association were brought to light. The tobacco industry saw the community efforts in Santa Barbara to eliminate SSTDs as a threat to their national tobacco marketing strategies; thus Santa Barbara County proved to be a testing ground. Not wanting local efforts to succeed and potentially spread to other communities, the tobacco industry launched an aggressive and surreptitious campaign to defeat SSTD ordinances in Santa Barbara County by providing financial and logistical support to the California Grocers Association. The California Grocers Association in turn used these resources to impede the enactment of any community based SSTD ordinances within the county.

Clearly, merchants in Santa Barbara were increasingly aware that local health officials were conducting undercover tobacco buys and evaluating SSTDs. It would be impossible to tease out how local, state, and national tobacco control activities taking place during the longitudinal tobacco purchases in this study impacted our data. In all likelihood the local efforts to enact SSTD bans, and the aggressive response from the California Grocers Association and tobacco industry to oppose such ordinances, raised merchant awareness of tobacco control laws and contributed to decreases in illegal tobacco sales rates seen in all three study communities. Obviously, with so many local and national factors and players taking part in the efforts to examine and enact community based legislation to ban SSTDs in Santa Barbara County, it would be impossible to tease out any singular causative agent.

As stated previously, the confirmatory buy in North Santa Barbara County shares a potential confound with previous studies^{9 19 20} that have examined illegal youth tobacco sales rates at stores under no legal obligation to remove their SSTDs. Retailers electing not to utilise SSTDs potentially lose their tobacco retail display allowances. It seems probable that those merchants forgoing this potential cash incentive might be different from those who do not. For example, retailers electing not to have SSTDs might be more inclined to enforce existing laws banning the sale of tobacco products to minors. If this were found to be the case, it would not be the absence of SSTDs per se that are fully responsible for the lowered illegal tobacco sales rates, but instead specific merchant factors or characteristics. More research is needed to find out if there are in fact consistent factors among those stores and merchants electing not to have SSTDs.

Results from this study raise an obvious and important question concerning where youth obtain tobacco products if their retail sources

become more difficult to obtain. For example, a recent study²⁴ showed that enforcing tobacco sales law significantly reduced merchants' illegal sales to minors; however, youth in these communities reported limited decreases in their ability to buy tobacco products. Yet results from the Santa Barbara County Health Department's survey contradict the findings from this study. Future research needs to determine if tobacco control efforts in the form of restricting youth retail access (that is, banning sales to minors, cigarette vending machines, and SSTDs) are successful at actually eliminating or significantly reducing youth retail sources of tobacco, or do these legal efforts merely shift the problem to other sources (for example, friends, parents, siblings, and/or sympathetic merchants).

The authors believe that both community norm change and social interaction help to explain the results of: (1) overall lower tobacco sales rates in the three communities; (2) the further decreases in sales seen after SSTD bans were implemented in Carpinteria and Santa Barbara; and (3) the lower sales rates in North Santa Barbara County stores without SSTDs. When a community begins to evaluate and publicly debate ordinances to ban SSTDs, it reasons that greater awareness of local tobacco control issues is generated and thus creates an environment conducive for community norm change. In addition, communities passing ordinances banning SSTDs are sending a clear and unambiguous message that tobacco sales to local youths are unacceptable; this in turn sets the stage for higher community expectations of local tobacco retailers.

SSTD bans also impact the social interactions between clerks and underage customers. In addition to making outright theft easier, SSTDs facilitate youth access because the clerk can distance himself or herself from the social exchange that occurs during the sales transaction. Contrast this with the exchange that occurs when SSTDs are banned or removed and the youth must directly ask the clerk to select and hand them a pack of cigarettes. In this situation, it is much more difficult for clerks to distance themselves from the broader implications of the transaction. One obvious way social interactions may decrease illegal cigarette sales to youth is through the increased opportunity to assess the customer's age. For example, several studies show that when youth have to interact with an adult sales clerk by providing their age or ID, sales decrease. Landrine and colleagues²⁵ showed that when 16 year old youths are asked their age when attempting to purchase cigarettes, sales rates decreased from 57.2% to 8.5%; when asked for identification, sales decreased to 2.4%. The 1996 California youth tobacco sales survey indicated that the sales rate for stores in which clerks asked for ID was only 3.3%, compared to a sales rate of close to 91% for those that did not ask for identification.²⁶ Future research is needed in this area to aid in the development of more specific merchant and sales clerk education programmes aimed at reducing youth access.

Lastly, the events in Santa Barbara County have engendered some specific insights into the financial costs involved in a protracted SSTD ban debate. As the debate about ordinances banning SSTDs heightened in Santa Barbara, governmental agencies (including the county health department, university experts, elected officials in several county communities, and various law enforcement agencies) as well as private industry (individual retailers, California Grocers Association, and the tobacco industry) were expending considerable financial resources advocating either for the passage or defeat of SSTD ordinances.

In Santa Barbara County, this process was conducted over several years and undoubtedly cost the public and private sector substantial amounts of money and resources. Contrast this with the city of Carpinteria's swift action to completely ban SSTDs. Not only did this action result in dramatic and sustained decreases in illegal cigarette sales to youth, but community officials, merchants, and industry representatives spent relatively little time, energy, and financial resources on a protracted legal struggle. In fact, merchants quickly adapted to the legislation by obtaining plastic display racks (provided to them by tobacco companies free of charge) allowing them to comply with the ordinance but prevent the loss of retail display allowances. In essence this scenario was obviously a win-win for all parties involved.

We conclude that while results from this case study cannot empirically prove ordinances banning SSTDs cause reductions in illegal youth tobacco sales, data from this study do suggest that engaging in debates about local ordinances banning SSTDs can reduce a community's illegal cigarette sales rates to its youth. Further, our results imply that communities or stores that move from debate to either banning or removing SSTDs may be able to reduce further or eliminate altogether illegal cigarette sales to minors over time. Outside of the potential social and health implications of decreasing youth tobacco access, the swift enactment of SSTD bans seems to offer distinct and substantial cost saving benefits to both the public and private sectors.

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